

REMARKS

Claims 2-11 are pending. Claim 10 has been amended. Claim 11 has been added. No new matter has been introduced. Reexamination and reconsideration of this application are respectfully requested.

In the April 19, 2007 Office Action, the Examiner rejected claims 2, 3, 5-8, and 10 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Application Publication No. 2003/0063715 to Peplinski ("Peplinski"). Claim 4 was rejected under 35 U.S.C. §103(a) as being obvious given Peplinski. Claim 9 was rejected under 35 U.S.C. §103(a) as being obvious given Peplinski in view of U.S. Patent No. 5,844,328 to Furst ("Furst"). These rejections are respectfully traversed.

35 U.S.C. §102(e) rejection – claims 2, 3, 5-8, and 10

Claims 2, 3, 5-8, and 10 were rejected under 35 U.S.C. §102(e) as being anticipated by Peplinski. The Examiner stated that Peplinski discloses a battery backup apparatus for use with a barrier movement operator comprising: (a) a DC voltage supply; a DC power connection from the DC voltage supply to a barrier movement control; (c) a battery having a first and second terminals; (d) a first conduction path and second conduction path; (e) a battery charging circuit; and (f) a unidirectional isolation device (Fig. 6a, item D1; page 4, paragraph 42, lines 3-5) connecting DC voltage from the first battery terminal to the DC voltage supply via the first conduction path (figure 6a). [Office Action, Pp. 4-5.]

Independent claim 10 recites (with emphasis added):

"10. A battery backup apparatus for use with a barrier movement operator comprising:

a DC voltage supply having a mains voltage input;

a DC power connection from the DC voltage supply to a barrier movement control;

a battery having first and second terminals;

a first conduction path and a second conduction path connected to the DC voltage supply;

a battery charging circuit for receiving a DC voltage from the DC voltage supply via the first conduction path and the second conduction path and for charging the battery when the DC voltage from the DC voltage supply exceeds a predetermined voltage; and

a third conduction path comprising a unidirectional isolation device connecting a battery DC voltage from the first battery terminal to the DC

voltage supply via the first conduction path when mains voltage to the mains voltage input fails.”

Peplinski discloses a movable barrier operator with a backup battery monitoring and notification device. Peplinski discloses use of one diode, D1, which prevents a battery B1 from backfeeding through regulator 220. [Para. 42] Peplinski also discloses that certain switches must be opened and others must be closed when switching from charging a backup battery to using the backup battery to power a garage door. Specifically, Peplinski discloses:

“The charging of batteries and the supplying of battery back-up power are controlled by switches S1, S2, S3, and S4, as shown in FIG. 6. **During ordinary operation of the garage door operator (no external power failure), the batteries B1 and B2 are connected to the battery chargers 210 and 212 to allow charging.**

...

When the garage door operator experiences a loss of external power, this loss of power cycles relays K1, K2, K3, and K4 to operate the corresponding switches S1, S2, S3, and S4. **First, the batteries B1 and B2 are disconnected from the battery chargers 210 and 212. More specifically, switches S2 and S4 are switched to the open position to disconnect batteries B1 and B2 from their respective battery chargers 210 and 212.** Second, back-up power is supplied to the garage door operator components. More specifically, switch S1 is closed to connect the batteries B1 and B2 to the garage door operator components and switch S3 is closed to connect the batteries B1 and B2 to each other so that they operate in series.”

[Peplinski, Pp. 37-38; emphasis added.]

Claim 10 recites a backup battery apparatus having a DC voltage supply *having a mains input voltage, ... a first conduction path and a second conduction path connected to the DC voltage supply, ... and a third conduction path comprising a unidirectional isolation device connecting a battery DC voltage from the first battery terminal to the DC voltage supply via the first conduction path when mains voltage to the mains voltage input fails.* In Peplinski, the backup batteries B1 and B2 are connected to a power source when being charged, but do not supply back-up power to the garage door operator components during this charging operation. In the event of a power failure, Peplinski teaches *disconnecting* the backup batteries from the power source and then providing the stored power to the garage door components. More specifically, in order to supply the back-up power, switches S1 and S3 must be closed when a loss of external power is experienced. Accordingly, Peplinski

discloses use of switches S1 and S3 for connecting batteries B1 and B2 in the event that back-up power is required.

The circuit of Peplinski thus *disconnects* the mains power source in the event of a power failure and therefore does not suggest both (a) *a first conduction path and a second conduction path connected to the DC voltage supply*, and (b) *a third conduction path comprising a unidirectional isolation device connecting a battery DC voltage from the first battery terminal to the DC voltage supply via the first conduction path when mains voltage to the mains voltage input fails*.

The Examiner argued that Peplinski discloses use of a diode D1 that is a unidirectional device. However, diode D1 does not connect *a battery DC voltage from the first battery terminal to the DC voltage supply via the first conduction path when mains voltage to the mains voltage input fails*, as is required by claim 10. Instead, a set of relays and switches connect the batteries B1 and B2 in order to supply the backup power. The use of such relays and switches introduces a time lag such that the back-up batteries in Peplinski are only connected after a power interruption has occurred.

Accordingly, claim 10 distinguishes over Peplinski. Claims 2-9 and 11 each depend, directly or indirectly (i.e., through claim dependencies), from claim 10 and therefore also distinguish over Peplinski for at least the same reasons as those discussed above with respect to claim 10. Therefore, applicants respectfully submit that the rejection of claims 2, 3, 5-8, and 10 under 35 U.S.C. §102(e) should be withdrawn.

35 U.S.C. §103(a) rejection – claim 4

Claim 4 was rejected under 35 U.S.C. §103(a) as being obvious given Peplinski. The Examiner stated the following:

“Peplinski discloses the battery backup apparatus of claim 10, as discussed above, and further discloses one or more visual signaling devices (page 3, paragraphs 32-33). Peplinski discloses that the battery backup apparatus can connect to the Internet and transmit fax messages to inform the user of system conditions.”

[Office Action, P. 7.]

Applicants note the claim 4 distinguishes over Peplinski, as discussed above with respect to the 35 U.S.C. §102(e) rejection of claim 10. Although the Examiner rejected claim 4 as being obvious, no reference other than Peplinski was discussed by the Examiner in the Office Action. Accordingly, applicants respectfully submit that the rejection of claim 4 under 35 U.S.C. §103(a) should be withdrawn.

35 U.S.C. §103(a) rejection – claim 9

Claim 9 was rejected under 35 U.S.C. §103(a) as being obvious given Peplinski in view of Furst. The Examiner stated that with respect to claim 9, Peplinski discloses the battery back up apparatus of claim 10. The Examiner also stated that Peplinski does not disclose circuitry for selectively disconnecting the first battery terminal from the first backup port when the first backup port is disconnected from the input DC voltage. However, the Examiner stated that this limitation was taught by Furst and that it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine the teachings of Peplinski and Furst in the direction of claim 9.

As discussed above, claim 9 distinguishes over Peplinski for at least the same reasons as those discussed above with respect to claim 10. Furst does not make up for the deficiencies of Peplinski. Specifically, Furst discloses a backup device for an electric appliance that includes a switch 72 that allows a battery 12 to be disconnected from an appliance 20. However, Peplinski in combination with Furst does not disclose, teach, or suggest both (a) *a first conduction path and a second conduction path connected to the DC voltage supply*, and (b) *a third conduction path comprising a unidirectional isolation device connecting a battery DC voltage from the first battery terminal to the DC voltage supply via the first conduction path when mains voltage to the mains voltage input fails*.

Accordingly, claim 9 distinguishes over Peplinski in combination with Furst. Therefore, applicants respectfully submit that the rejection of claim 9 under 35 U.S.C. §103(a) should be withdrawn.

New Claim 11

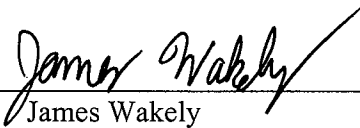
Applicants have added new claim 11. Claim 11 depends from claim 10 and therefore distinguishes over Peplinski for at least the same reasons as those discussed above with respect to claim 10. Claim 11 recites (with emphasis added): "The battery backup apparatus of claim 10, wherein *the predetermined voltage exceeds 20 volts.*"

Peplinski discloses a transformer 202 and rectifier that covert an AC line voltage into an unregulated DC supply of approximately *18 volts*. [Para. 41.] Accordingly, the DC supply of Peplinski does not exceed 20 volts, as is required by claim 11. Claim 11 therefore further distinguishes over Peplinski.

CONCLUSION

Applicants believe that the foregoing amendments place the application in condition for allowance, and a favorable action is respectfully requested. If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Chicago telephone number (312) 577-7000 to discuss the steps necessary for placing the application in condition for allowance should the Examiner believe that such a telephone conference would advance prosecution of the application.

Respectfully submitted,

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